

● FEATURES

- WIDE FREQUENCY RANGE
- STABILITY TO ± 5 PPM
- CUSTOM SPECIFICATIONS

● SPECIFICATIONS

FREQUENCY RANGE	1.00 MHz TO 100.00 MHz
FREQUENCY STABILITY OVER TEMPERATURE RANGE (REFERENCED TO 25°C)	± 5 PPM TO ± 50 PPM MAX AT VCC = +5.0 VDC AND STANDARD LOAD (SEE TABLE 1 FOR STABILITY OVER TEMPERATURE RANGE)
OPERATING TEMPERATURE RANGE	0°C TO +50°C (NARROW) 0°C TO +70°C (STANDARD) -40°C TO +85°C (EXTENDED) AT VCC = +5.0 VDC AND STANDARD LOAD
STORAGE TEMPERATURE RANGE	-40°C TO +85°C
AGING CHARACTERISTICS	± 4 PPM MAX FOR THE FIRST YEAR ± 2 PPM MAX PER YEAR THEREAFTER
OUTPUT WAVEFORM OPTIONS	TTL, HCMOS, OR ACNOS (SEE TABLE 2)
SYMMETRY	NORMAL: 40/60 % TIGHT: 45/55 %
FREQUENCY STABILITY OVER LOAD VARIATION	± 3 PPM MAX FOR 10% VARIATION AT VCC = +5.0 VDC AT 25°C
SUPPLY VOLTAGE	+5.0 VDC $\pm 5\%$ (3.3 VDC AVAILABLE)
FREQUENCY STABILITY OVER SUPPLY VOLTAGE VARIATION	± 5 PPM MAX FOR 5% VARIATION AT VCC = +5.0 VDC AND STANDARD LOAD AT 25°C
SUPPLY CURRENT	35 mA MAX AT VCC = +5.0 VDC AND STANDARD LOAD AT 25°C
ABSOLUTE VOLTAGE RANGE	-0.5 TO +7.0 VDC FOR VCC AND VC (NON DESTRUCTIVE)
ENABLE/DISABLE FUNCTION	CONTROL PIN 2: HIGH OR OPEN (+2.0 VDC MIN) OUTPUT PIN 4: ENABLED CONTROL PIN 2: LOW OR GND (+0.8 VDC MAX) OUTPUT PIN 4: DISABLED (HIGH Z)
STORAGE TEMPERATURE RANGE	-40°C TO +85°C
PHASE NOISE (TYPICAL)	SEE GRAPH FOR PHASE NOISE CHARACTERISTICS



● TEMPERATURE RANGE DESIGNATIONS

TABLE 1		
CODE	TEMPERATURE RANGE	TEMPERATURE STABILITY
A	0°C TO +50°C	± 5 PPM
B	0°C TO +50°C	± 10 PPM
C	0°C TO +50°C	± 15 PPM
D	0°C TO +50°C	± 20 PPM
E	0°C TO +50°C	± 25 PPM
F	0°C TO +70°C	± 10 PPM
G	0°C TO +70°C	± 15 PPM
H	0°C TO +70°C	± 20 PPM
I	0°C TO +70°C	± 25 PPM
J	0°C TO +70°C	± 35 PPM
K	0°C TO +70°C	± 50 PPM
L	-40°C TO +85°C	± 20 PPM
M	-40°C TO +85°C	± 25 PPM
O	-40°C TO +85°C	± 30 PPM
P	-40°C TO +85°C	± 35 PPM
Q	-40°C TO +85°C	± 50 PPM

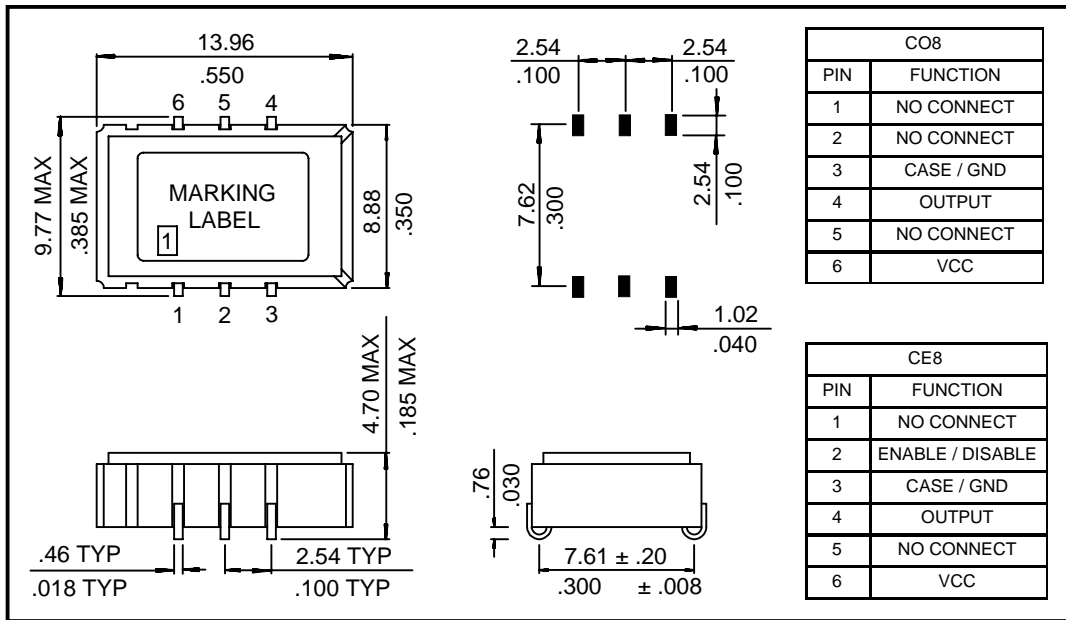
● OUTPUT AND LOAD CHARACTERISTICS

TABLE 2	
TTL - 10 TTL LOADS	TTL/HCMOS COMPATIBLE SYMMETRY: 40/60% TO 60/40% AT +1.4 VDC VOH: +2.4 VDC MIN VOL: +0.4 VDC MAX RISE/FALL TIME: 10 ns WITH STANDARD LOAD (20% TO 80%)
HCMOS - 15 pF MAX	TTL/HCMOS COMPATIBLE SYMMETRY: 40/60% TO 60/40% AT 50% LEVEL VOH: +4.5 VDC MIN VOL: +0.5 VDC MAX RISE/FALL TIME: 5 ns WITH STANDARD LOAD (20% TO 80%)
ACNOS - 15 pF MAX	ACNOS TO DRIVE 3 GATES AT TTL LEVELS SYMMETRY: 40/60% TO 60/40% AT 50% LEVEL VOH: +4.5 VDC MIN VOL: +0.5 VDC MAX RISE/FALL TIME: 5 ns WITH 30 pF LOAD (20% TO 80%)

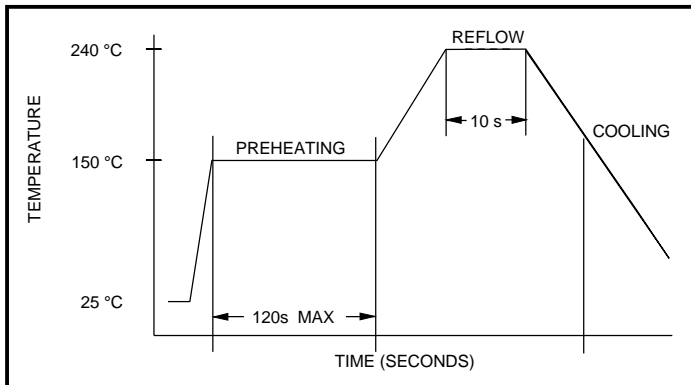
● MECHANICAL CHARACTERISTICS

MECHANICAL SHOCK	MIL-STD-202, METHOD 213, CONDITION E
THERMAL SHOCK	MIL-STD-883, METHOD 1011, CONDITION A
RANDOM VIBRATION	MIL-STD-883, METHOD 2007, CONDITION A
GROSS LEAK	100% LEAK TESTED IN DEIONIZED WATER
HERMETIC SEAL	LEAK RATE LESS THAN 0.05 PPM ATM x cc/s OF HELIUM
SOLDERING CONDITIONS	240° C ± 5 s MAXIMUM FOR 10 s
MECHANICAL	SURFACE MOUNT, 6 PIN PER OUTLINE DRAWING

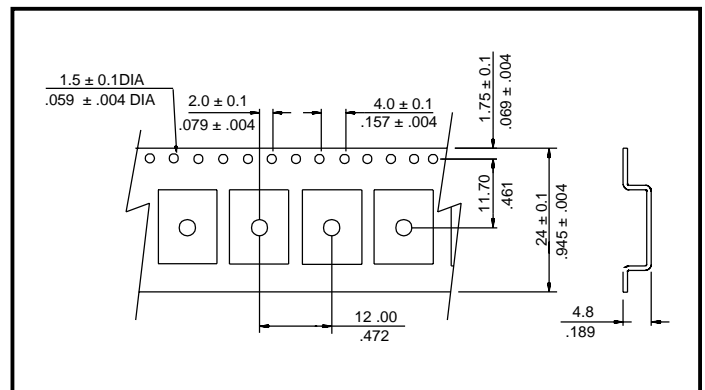
● OUTLINE DRAWINGS



● SOLDER REFLOW PROFILE



● CARRIER TAPE DIMENSIONS



● PART NUMBERING SYSTEM

SERIES	OUTPUT (TABLE 2)	CODE (TABLE 1)	FREQUENCY	SYMMETRY	TAPE AND REEL
CO8 CE8	1 2 3 TTL HCMOS ACMOS	A THROUGH Q	IN MHZ	T: TIGHT	TR

EXAMPLE: CE821-16M384000ENABLE / DISABLE CLOCK: 14 PIN DIP, HCMOS
 ± 25 PPM, 0 TO 70°C, AT 16.384 MHZ

● PHASE NOISE CHARACTERISTICS

